

Application No.: 09/934,120  
Supplemental Amendment Dated: December 21, 2005  
Responsive to the Office Action dated: August 5, 2005

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**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Previously Presented) A transmitting apparatus for transmitting a transmission packet formed from a series of source packets, each source packet including a source packet data and a source packet header including a time stamp, comprising:

transmission packet generating means determining a value within a predetermined portion of said time stamp of each of said source packets, grouping one or more of said source packets that have a same value, combining and outputting said grouped source packets having the same value as one unit of transmission packet data; and

data outputting means producing the transmission packet by adding predetermined additional information to said unit of transmission packet data.

2. (Previously Presented) The transmitting apparatus according to claim 1, wherein said transmission packet generating means inserting (N-1) units of dummy transmission packet data between two units in a sequence of units,

when a difference between the value of the two units is  $N \geq 2$  where N is an integer.

3. (Withdrawn) A transmitting apparatus for transmitting a source packet constructed of a pair of data of the source packet data and a source packet header including a time stamp, comprising:

split number designating means of designating a split number M ( $M \geq 1$ ) to split said source packet;

transmission packet generating means of investigating values of a predetermined portion of said time stamp included in said source packet when said source packet is inputted,

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outputting said M units split from said source packet as transmission packet data when difference between values of predetermined portions of said time stamp included in said two source packets in series is  $N(N \geq 0)$  being  $N \leq L(L \geq 1)$ , and

outputting  $(N-L)$  units of dummy transmission packet data when difference between values of said predetermined portions of said time stamp is N being  $N > L$ ; and

data outputting means of outputting as transmission packet outward those being said outputted transmission packet data and/or said dummy transmission packet data to which a predetermined additional information is added.

4. (Withdrawn) The transmitting apparatus according to claim 3, wherein said M is 2, 4 or 8.

5. (Previously Presented) The transmitting apparatus according to any of claims 1 to 2, wherein K units of said source packets having a variable length or a fixed length with  $K \geq 1$  are inputted as a group to said transmission packet generating means.

6. (Previously Presented) The transmitting apparatus according to any of claims 1 to 2,

wherein said predetermined additional information includes a CIP header, an isochronous header, a header CRC and a data CRC,

said data outputting means includes: CIP header adding means adding said predetermined CIP header to said unit of transmission packet data; and

an IEEE1394 interface for producing said transmission packet by further adding said isochronous header, said header CRC and said data CRC to the unit of transmission packet data to which said predetermined CIP header is added and outputting said produced transmission packet.

7. (Previously Presented) The transmitting apparatus according to claim 6, wherein said source packet data includes a transport stream packet of MPEG.

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8. (Previously Presented) The transmitting apparatus according to claim 7, wherein said time stamp is expressed with a Cycle\_Count and a Cycle\_Offset of a CycleTimeRegister of an IEEE1394 standard, and

said predetermined portion is a portion of said Cycle\_Count.

9-12. (Cancelled)

13. (Withdrawn) A packet mode determining method,

wherein upon receipt of a source packet constructed of a pair of data of the source packet data and a source packet header including a time stamp,

difference N between a value of said time stamp included in said source packet received immediately prior thereto and a value of the time stamp included in said source packet received this time is calculated;

in the case where said N gives  $N > (A+1)$ ,  $(N-A-1)$  units of dummy packets are outputted, and thereafter said source packet received this time is split into M units and outputted, and at the same time  $(M-1)$  is substituted for A; and

in the case where said N does not give  $N > (A+1)$ , said source packet received this time is split into M units and outputted, and at the same time  $(M-N)$  is substituted for A.

14. (Withdrawn) The packet mode determining method according to claim 13, wherein  $N=1$  and  $A=0$  in case of initially received said source packet.

15. (Withdrawn) The packet mode determining method according to claim 13, wherein said M is a value designated in advance.

16. (Withdrawn) The packet mode determining method according to claim 14, wherein said M is a value designated in advance.

17. (Withdrawn) The packet mode determining method according to claim 13, wherein said M is received in a pair with said source packet.

18. (Withdrawn) The packet mode determining method according to claim 14, that said M is received in a pair with said source packet.

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19. (Withdrawn) The packet mode determining method according to any of claims 13 to 18, wherein said M is 2, 4 or 8.

20. (Withdrawn) The packet mode determining method according to any of claims 9 to 18, wherein data of said source packet are an MPEG transport stream packet.

21. (Withdrawn) The packet mode determining method according to claim 20,  
wherein said time stamp is expressed by Cycle\_Count and Cycle\_Offset of CycleTimeRegister of IEEE1394 standards; and  
said difference N is difference between said Cycle\_Counts.

22. (Withdrawn) A source packet generating apparatus, comprising:  
packet generating means of generating a data packet transmitted in a first clock and determining transmission timing of said data packet expressed in said first clock; and  
time information adding means of converting said transmission timing to time information on a time axis expressed in a second clock, adding to said data packet the time stamp with a value determined based on all or a part of said time information and outputting a data packet to which the time stamp is added as a source packet;

wherein outputted said source packet is converted into a packet for transmission based on the value of that added time stamp is outputted from an interface.

23. (Withdrawn) The source packet generating apparatus according to claim 22, wherein in the case where a predetermined data packet in said data packet is given as a first data packet and the data packet other than said first data packet in said data packet is given as a second data packet, said time information adding means determines a value of time stamp to be added to said second data packet based on a value subject to conversion into time difference in said second clock from difference in said transmission timing in said first clock between said first data packet and said second data packet.

24. (Withdrawn) The source packet generating apparatus according to claim 23, wherein said time information adding means gives a value of time stamp to be added to said first data packet being 0, and

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gives a value of time stamp to be added to said second data packet being a value subject to conversion into time difference in said second clock.

25. (Withdrawn) The source packet generating apparatus according to claim 23, wherein said time information adding means gives a value of time stamp to be added to said first data packet being a predetermined value, and

gives a value of time stamp to be added to said second data packet being a value subject to addition of said predetermined value subject to conversion into time difference in said second clock.

26. (Withdrawn) The source packet generating apparatus according to claim 23, wherein said predetermined data packet is a head data packet.

27. (Withdrawn) The source packet generating apparatus according to claim 22, wherein in the case where a data packet adjacent to a third data packet being a data packet with an already determined value of time stamp is given as a fourth data packet, said time information adding means gives a value subject to addition of a value of said time stamp added to said third data packet to a value subject to conversion into time difference in said second clock from difference in said transmission timing in said first clock between said third data packet and said fourth data packet being a value of said time stamp to be added to fourth data packet.

28. (Withdrawn) The source packet generating apparatus according to claim 27, wherein said time information adding means gives a value of time stamp to be added to a head data packet in said data packet being a predetermined value.

29. (Withdrawn) The source packet generating apparatus according to any of claims 22 to 28, wherein a frequency of said first clock is 27 MHz, and

said data packet is an MPEG2 transport stream packet.

30. (Withdrawn) The source packet generating apparatus according to claim 29, wherein said packet generating means outputs said MPEG2 transport stream packet subject to addition of a dummy time stamp instead of outputting said MPEG2 transport stream packet to said time information adding means, and

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said time information adding means replaces said dummy time stamp with the generated said time stamp.

31. (Withdrawn) The source packet generating apparatus according to claim 29, wherein said packet generating means receives an MPEG2 program stream packet and generates said MPEG2 transport stream packet from said MPEG2 program stream packet.

32. (Withdrawn) The source packet generating apparatus according to claim 30, wherein said packet generating means receives an MPEG2 program stream packet and generates said MPEG2 transport stream packet from said MPEG2 program stream packet.

33. (Withdrawn) The source packet generating apparatus according to claim 29, wherein a frequency of said second clock is approximately 24.576 MHz,

said time information is a value based on CycleTimeRegister in IEEE1394 standards;  
and

said time stamp is a time stamp described in a source packet header in IEC61883.

34. (Withdrawn) The source packet generating apparatus according to claim 22, wherein said "output" means "output outward".

35. (Withdrawn) The source packet generating apparatus according to claim 22, comprising buffer means of storing a data packet to which said time stamp is added as a source packet, wherein

said "output" means "write in said buffer", and

when a predetermined number of units of said source packets are written in, said buffer means

outputs said predetermined number of units of said source packets.

36. (Currently Amended) ~~A program to cause a computer to function as a whole or a part of embodied on a medium that can be processed by a computer containing instructions to cause a computer to perform the steps of:~~

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~~transmission packet generating means~~ determining a value within a predetermined portion of a time stamp of a source packet, grouping one or more source packets that have a same value, combining and outputting said grouped source packets having the same value as one unit of transmission packet data, and

~~data outputting means~~ producing a transmission packet by adding predetermined additional information to said unit of transmission packet data, and outputting said produced transmission packet.

~~of the transmitting apparatus according to claim 1.~~

37. (Withdrawn) A program to cause a computer to function as a whole or a part of:

split number designating means of designating a split number  $M$  ( $M \geq 1$ ) to split said source packet;

said transmission packet generating means of investigating values of a predetermined portion of said time stamp included in said source packet when said source packet is inputted,

outputting said  $M$  units split from said source packet as transmission packet data when difference between values of said predetermined portions of said time stamp included in two source packets in series is  $N$  ( $N \geq 0$ ) being  $N \leq L$  ( $L \geq 1$ ), and

outputting  $(N-L)$  units of dummy transmission packet data when difference between values of said predetermined portions of said time stamp is  $N$  being  $N > L$ ; and

data outputting means of outputting as transmission packet outward those being said outputted transmission packet data and/or said dummy transmission packet data to which a predetermined additional information is added;

of the transmitting apparatus according to claim 3.

38. (Withdrawn) A program to cause a computer to function as a whole or a part of:

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packet generating means of generating a data packet transmitted in a first clock and determining transmission timing of said data packet expressed in said first clock; and

time information adding means of converting said transmission timing to time information on a time axis expressed in a second clock, adding to said data packet the time stamp with a value determined based on all or a part of said time information and outputting a data packet to which the time stamp is added as a source packet;

of the source packet generating apparatus according to claim 22.

39. (Cancelled)

40. (Withdrawn) A medium capable of being processed by a computer that bears a program to cause the computer to function as a whole or a part of

split number designating means of designate a split number  $M$  ( $M \geq 1$ ) to split said source packet;

said transmission packet generating means of investigating values of a predetermined portion of said time stamp included in said source packet when said source packet is inputted,

outputting said  $M$  units split from said source packet as transmission packet data when difference between values of said predetermined portions of said time stamp included in two source packets in series is  $N$  ( $N \geq 0$ ) being  $N \leq L$  ( $L \geq 1$ ), and

outputting  $(N-L)$  units of dummy transmission packet data when difference between values of said predetermined portions of said time stamp is  $N$  being  $N > L$ ; and

data outputting means of outputting as transmission packet outward those being said outputted transmission packet data and/or said dummy transmission packet data to which a predetermined additional information is added,

of the transmitting apparatus according to claim 3.

41. (Withdrawn) A medium capable of being processed by a computer that bears a program to cause the computer to function as a whole or a part of



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packet generating means of generating a data packet transmitted in a first clock and determining transmission timing of said data packet expressed in said first clock; and

time information adding means of converting said transmission timing to time information on a time axis expressed in a second clock, adding to said data packet the time stamp with a value determined based on all or a part of said time information and outputting a data packet to which the time stamp is added as a source packet;

of the source packet generating apparatus according to claim 22.

42-43. (Cancelled)

44. (Withdrawn) A program to cause a computer to execute all or a part of the steps, in the packet mode determining method according to claim 13, of:

upon receipt of a source packet constructed of a pair of data of the source packet data and a source packet header including a time stamp,

calculating difference  $N$  between a value of said time stamp included in said source packet received immediately prior thereto and a value of the time stamp included in said source packet received this time;

in the case where said  $N$  gives  $N > (A+1)$ , outputting  $(N-A-1)$  units of dummy packets, and thereafter splitting said source packet received this time into  $M$  units and outputting them, and at the same time substituting  $(M-1)$  for  $A$ ;

in the case where said  $N$  does not give  $N > (A+1)$ , splitting said source packet received this time into  $M$  units and outputting them, and at the same time substituting  $(M-N)$  for  $A$ .

45-46. (Cancelled)

47. (Withdrawn) A medium capable of being processed by a computer that bears a program to cause a computer to execute all or a part of the steps, in the packet mode determining method according to claim 13, of:

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upon in receipt of a source packet constructed of a pair of data of the source packet data and a source packet header including a time stamp,

calculating difference  $N$  between a value of said time stamp included in said source packet received immediately prior thereto and a value of the time stamp included in said source packet received this time;

in the case where said  $N$  gives  $N > (A+1)$ , outputting  $(N-A-1)$  units of dummy packets, and thereafter splitting said source packet received this time into  $M$  units and outputting them, and at the same time substituting  $(M-1)$  for  $A$ ;

in the case where said  $N$  does not give  $N > (A+1)$ , splitting said source packet received this time into  $M$  units and outputting them, and at the same time substituting  $(M-N)$  for  $A$ .

48. (Previously Presented) A transmitting method for transmitting a transmission packet formed from a series of source packets, each source packet including a source packet data and a source packet header including a time stamp, comprising:

a step of determining a value within a predetermined portion of said time stamp of each of said source packets, grouping one or more of said source packets that have a same value, combining and outputting said grouped source packets having the same value as one unit of transmission packet data; and

a step of producing the transmission packet by adding predetermined additional information to said unit of transmission packet data.

49. (Withdrawn) A transmitting method for transmitting a source packet constructed of a pair of data of the source packet data and a source packet header including a time stamp, comprising:

a step of split number designating means of designating a split number  $M$  ( $M \geq 1$ ) to split said source packet;

a step of investigating values of a predetermined portion of said time stamp included in said source packet when said source packet is inputted,

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outputting said M units split from said source packet as transmission packet data when difference between values of predetermined portions of said time stamp included in said two source packets in series is  $N(N \geq 0)$  being  $N \leq L(L \geq 1)$ , and

outputting  $(N-L)$  units of dummy transmission packet data when difference between values of said predetermined portions of said time stamp is  $N$  being  $N > L$ ; and

a step of outputting as transmission packet outward those being said outputted transmission packet data and/or said dummy transmission packet data to which a predetermined additional information is added.

50. (Withdrawn) A source packet generating method, comprising:

a step of generating a data packet transmitted in a first clock, and determining transmission timing of said data packet expressed in said first clock; and

a step of converting said transmission timing to time information on a time axis expressed in a second clock, adding to said data packet the time stamp with a value determined based on all or a part of said time information and outputting a data packet to which the time stamp is added as a source packet;

wherein outputted said source packet is converted into a packet for transmission based on the value of that added time stamp is outputted from an interface.